Startrans IO, LLC

January 11, 2013

Mr. Patrick Young
California Public Utilities Commission
505 Van Ness Avenue
San Francisco, California 94102

Subject: Startrans IO, LLC comments on CPUC draft RPS Portfolio Scenarios for 2013/2014 presented at the Joint CEC and CPUC Staff Workshop on Renewable Resource Portfolios on December 19, 2012

Dear Mr. Young:

Startrans IO, LLC ("Startrans"), an independent transmission company and Participating Transmission Owner ("PTO") with the California Independent System Operator ("CAISO") appreciates the opportunity to provide comments on the draft Renewable Portfolio Standard ("RPS") scenario for 2013/2014. Startrans believes the draft RPS scenarios for 2013/2014 posted by CPUC Energy Division staff are comprehensive but would benefit from the following areas of improvement: 1) all three scenarios significantly underestimate the potential renewable generation development in the "Nevada C" region (Valley Electric Association or "VEA" service area as well Eldorado/Mead region); 2) the scenarios do not reflect the differential value represented by high-quality, dependable geothermal generation development in central Nevada that will be available to serve the California load and help achieve the RPS standard; and 3) to the extent the scenarios show sufficient resources to meet the state's 33% RPS, that conclusion will quickly become obsolete if policy makers pursue a higher (e.g., 40%) RPS standard, with associated higher need for new transmission capacity.

Additionally, we would like to take this opportunity to introduce the Startrans proposal for upgrading the existing Mead-Adelanto Project from its existing AC to HVDC operation ("MAP Upgrade" or "MAP AC to HVDC Conversion"), which would increase the transmission capacity between central/southern Nevada to the Southern California load center by approximately 2,200 MW. As this proposed transmission upgrade project does not require the construction of new transmission facilities, it is the most cost-effective and environmentally-benign way of increasing the transmission capacity in the region. Planning-level estimates prepared by one of the leading manufacturers of HVDC equipment (a multi-billion dollar global

engineering and construction company) and Power Engineers, an engineering consultant, estimate that the entire cost of the conversion of the Mead-Adelanto Project to HVDC operation (including the cost of two HVDC converter stations and the associated downstream and upstream upgrades) would be approximately $700 million. This EPC cost for 2,200 MW of additional transfer capacity into the heart of Southern California load center is 25-30% of the cost of new construction of similarly-sized projects in this region, thereby providing ratepayers significant benefits and cost savings. The MAP Upgrade project will facilitate the development and delivery of renewable (solar and geothermal) and conventional generation from the Eldorado Valley/Mead area, the VEA system and Central Nevada to satisfy both the current and potentially expanded California RPS requirements.

Startrans is an independent transmission company that owns an interest in two transmission projects, the Mead-Adelanto Project ("MAP") and the Mead-Phoenix Project ("MPP") (together referred to as the "Mead Projects"). The existing Mead Projects use 500 kV AC lines to connect generation centers in central Arizona and southern Nevada to the heart of the Southern California electric demand center[1]. Startrans acquired its interests in the Mead Projects ("Mead Interests") in early 2008 from a municipal corporation and public power entity in California. Startrans' ownership of capacity in the Mead Projects was turned over to CAISO control, enabling Startrans to become a PTO with the CAISO. The CAISO collects Startrans' FERC-approved Transmission Revenue Requirement ("TRR") in its Transmission Access Charge ("TAC"). The acquisition of the Mead Interests has also provided a platform for Startrans to advance its investments in independent transmission projects in the southwestern U.S.

Startrans believes that the CPUC RPS scenarios for 2013/2014 significantly underestimate potential deliveries of renewable resources in the VEA service area and Mead/Eldorado area into the Southern California load center. Based upon the CAISO and LADWP generation interconnection queue, approximately 5,500 MW of new renewable generation projects are in different stages of generation interconnection process for these entities. Southern Nevada is one of the most attractive regions for solar power development in the US. In addition to high Direct Normal Irradiance (DNI), the area has an abundance of reasonably-priced, desirable land for solar development and a streamlined and cost-effective permitting process. As land and permitting costs constitute a significant portion of the solar PV project capital outlays, those favorable economics, coupled with potentially high capacity factors of the proposed solar projects in this region, constitute a significant economic advantage compared to other regions within and outside of California. Moreover, these projects have a higher probability of completion than projects located in other areas. Though it is possible that only a

[1] MAP, with a transmission capacity of 1,296 MW, is a 500 kV AC transmission line that extends 202 miles from the Marketplace substation in southern Nevada to the Adelanto substation in Southern California. MPP, with a transmission capacity of 1,923 MW, is a 500 kV AC transmission line that extends 256 miles from the Marketplace substation to the Perkins substation near Sun City, Arizona.

fraction of the proposed renewable generation in this area will be available in 2013/2014, we believe that assuming a total generation of 316 MW from this region is a highly conservative estimate. Furthermore, the development of this generation is contingent upon the availability of transmission capacity that would enable the generation from these proposed projects to be delivered into California in an economic and efficient manner. We believe transmission facility upgrades, of which the MAP Upgrade project is demonstrably the most cost-effective option, can unlock enormous potential in the "Nevada C" area.

In addition to the solar generation projects proposed for development in southern Nevada, the central Nevada region holds the promise of significant quantity of potential geothermal generation. Unlike intermittent solar PV generation, with highly variable output depending on sun position and weather, geothermal project projects provide dependable high-quality baseload renewable generation. Most of the geothermal generation development in central Nevada is targeted for delivery into Southern California. The proposed CPUC RPS scenario for 2013/2014 does not appear to acknowledge the potential geothermal generation in central Nevada. Similar to solar PV generation in southern Nevada, the development and delivery of proposed geothermal generation projects in central Nevada can be facilitated by the availability of economic transmission capacity from southern Nevada into the Southern California load centers.

The proposed CPUC RPS scenario for 2013/2014 may significantly understate the renewable generation need since it only aims to achieve the near-term 33% RPS goal. It is clear that development of renewable generation projects is highly dependent upon the availability of transmission projects. Promoting development of economic and efficient transmission projects to the most desirable renewable regions is absolutely vital for ensuring the availability of effective, efficient and economic renewable resources for satisfying California's RPS. For planning purposes, it would be sensible to determine which resource areas must be utilized to help California achieve even greater goals that may be imminent, such as an increase in RPS goals to 40% (or higher) of the state's electric deliveries. This will be especially compelling to the extent that planned transmission facilities are either delayed or deferred, thereby stressing the state's ability to provide timely interconnection for renewable resources (some of which may only be funded with expiring federal stimulus grants).

In view of the foregoing, Startrans would like to introduce its proposal to upgrade MAP (one of the two Mead Projects). The MAP Upgrade would significantly increase the transmission capacity between southern Nevada and Southern California in an environmentally-friendly and cost-effective manner, and would help the CPUC in achieving the near-term RPS goal as well as any future expanded goals. The Mead Projects were planned, designed, permitted and constructed with the potential of a future expansion of their transmission capacity through conversion to HVDC operation. Since the conversion will use the existing transmission lines, the MAP Upgrade can add 2,200 MW in transmission capacity into Southern California in a timely and cost-effective manner, with minimal environmental impact. As an owner of the Mead

Projects, Startrans has the right to initiate an upgrade of the MAP and MPP transmission systems as permitted in the joint ownership agreements. Startrans has formally initiated the process for the MAP upgrade and is actively involved in the engineering design and development of this upgraded transmission system.

The conversion of MAP to HVDC operation would require: 1) the construction of two new HVDC 3,500 MW converter stations, one each at Marketplace substation and Adelanto substation; 2) the construction of a 1.5 mile 500 kV line between the 500 kV bus at the existing Eldorado substation and the existing Marketplace substation; and 3) construction of an approximately 12 mile 500 kV double circuit transmission line that would loop the existing Vincent-Lugo 500 kV line to the 500 kV bus at Adelanto substation. The attached vicinity sketch shows the geographic location of the project and outlines the scope of the upgrade. This HVDC conversion project would result in increasing the transmission capacity of this system by 2,200 MW (from its existing level of 1,296 MW to a new rating of approximately 3,500 MW) without the need to construct any new transmission lines between the two new HVDC terminals. Therefore, the MAP Upgrade would be one of the fastest-to-construct, most cost-effective and environmentally-benign transmission upgrade projects in the western U.S. Based upon the initial cost estimates from a multi-billion dollar, global engineering and construction company that is also one of the world's leading manufacturers and installers of HVDC equipment and Power Engineers, the MAP HVDC conversion project's EPC would cost approximately $700 million for a 2,200 MW capacity increase. As CPUC staff is well aware, this cost is only a fraction of the cost of comparable transmission projects of this magnitude in the southwestern U.S. Furthermore, the project has low execution risk and could be brought on-line by summer 2016. The planning, development, construction and commissioning timeline for a transmission project of a similar size in this region would generally require eight to ten years. Startrans believes that these features make the MAP Upgrade a no-regret, high-value and low-cost transmission upgrade project for the California ratepayers.

In addition to facilitating the development and delivery of new renewable generation in the Eldorado/Mead area, the VEA service territory and central Nevada, the proposed transmission upgrade will also provide the following benefits to California customers, including:

1. Improving deliverability of renewable energy from the Eldorado region into the Southern California load center and facilitating the dynamic transfer of high-quality and cost-effective renewable resources into California;
2. Facilitating the retirement of once-through cooling units;
3. Offsetting the generation lost in the region from a shutdown of SONGS;
4. Reducing dependence on out-of-state coal-fired power generation by Load Serving Entities (LSEs) in California;

5. Strengthening the CAISO system by providing access to an additional 2,200 MW of generation and effectuating the integration of the VEA system;
6. Providing California LSEs access to highly-efficient, environmentally-friendly combined cycle generation located in Nevada and Arizona thereby enhancing the depth of the energy supply, Ancillary Services and balancing energy markets (that can facilitate integration of intermittent resources located inside California);
7. Reducing transmission system congestion; and
8. Improving transmission system reliability.

In view of the foregoing, Startrans urges Energy Division Staff and the California Public Utilities Commission to: (a) increase its estimates of renewable resource availability from the "Nevada C" region by a substantial amount; (b) recognize that some subset of that capacity represents geothermal resources, which offers preferred dependability; and (c) encourage cost-effective transmission that can access the "Nevada C" area to unlock renewable generation and provide a hedge against delays in other transmission facilities.

Thank you for the opportunity to provide these comments. If you have any questions, please feel free to contact me at (916) 740-0990.

Sincerely,

Ali Amirali

GM – Startrans IO, LLC

cc: Robert Strauss
Kevin Dudney
Robert Sparks (CAISO)
Neil Millar (CAISO)

FIGURE 1 – Vicinity Sketch for MAP Upgrade